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## Resolving occlusion in augmented reality

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↑ **ABSTRACT**

Current state-of-the-art augmented reality systems simply overlay computer-generated visuals on the real-world imagery, for example via video or optical see-through displays. However, overlays are not effective when displaying data in three dimensions, since occlusion between the real and computer-generated objects is not addressed. We present a video see-through augmented reality system capable of resolving occlusion between real and computer-generated objects. The heart of our system is a new algorithm that assigns depth values to each pixel in a pair of stereo video images in near-real-time. The algorithm belongs to the class of stereo matching algorithms and thus works in fully dynamic environments. We describe our system in general and the stereo matching algorithm in particular.